

DETAILED ACTION

Election/Restrictions

1. Restriction is required under 35 U.S.C. 121 and 372.

This application contains the following inventions or groups of inventions which are not so linked as to form a single general inventive concept under PCT Rule 13.1.

In accordance with 37 CFR 1.499, applicant is required, in reply to this action, to elect a single invention to which the claims must be restricted.

Group 1, claim(s) 1-10, drawn to an apparatus comprising of an Injection molding equipment

Group II, claim(s) 11-15, drawn to a method of using Injection molding equipment.

2. The inventions listed as Groups I and II do not relate to a single general inventive concept under PCT Rule 13.1 because, under PCT Rule 13.2, they lack the same or corresponding special technical features for the following reasons: the common technical feature for these two groups of claim is as follow: an ejector for removing an article from a mold, comprising of two ejector portions (closeable upon each other). This technical feature can not be a special technical feature as defined in PCT Rule 13.2 as this technical feature fails to provide a contribution to the art as it was found to be present in prior art (Sicilia U.S. Publication No. 2002/0014720). Therefore, a holding that they lack a single general inventive concept is proper.

3. During a telephone conversation with James R. Haller on 5/20/2008 a provisional election was made without traverse to prosecute the invention of Group I, claims 1-10.

Affirmation of this election must be made by applicant in replying to this Office action. Claims

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11-15 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claims 2 and 4 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 2 is indefinite, because it is unclear how this claim further limit any base claim as it is dependent onto itself. Likewise, claim 4 which is dependent on claim 2 is also indefinite since it is unclear how this claim further limits claim 2 as the limitation in this claim 4 is identical to base claim 2. However, for the purpose of examining these claims, examiner interpreted claim 2 to be dependent upon claim 1 and claim 4 to be dependent upon claim 3.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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7. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

8. Claims 1-5 and 7-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sicilia (U.S. Publication No. 2002/0014720), and further in view of Koch et al. (U.S. Patent No. 5,817,345).

With regards to claims 1 and 3, Sicilia teaches a turret having separate faces carrying respective cores that are receivable in the cavities to define mold shapes (Figure 1). The Sicilia diagram (Figure 1) shows a turret (24) having separate faces (36 a-d), carrying respective cores (56 a-d) receivable in the cavity (104). The turret can rotate around an axis, (Figure 1, # 28, page 5 paragraph [0075]) to bring the respective cores into alignment with said cavities. The turret and first mold half are so configured that when one core (56b) is in registration with the cavity (104) at station 44, another core (56a) is in position for ejection at station 40. The ejector for ejecting previously molded articles has cooperating molded article-engaging portions (64 a-d). At station 48 or while rotating to station 48, the article engaging portions (64) are brought into engagement around the core (56c, Page 6, Paragraph [0088]. The engaging portions are being **moved in a first direction to close upon** each other at station 48. The engaging portions remain closed until they reach ejector station 40, where they **move in a second direction** to separate the

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molded article (100) from said core (56a, Page 6: paragraph [0093]). The Sicilia turret fails to teach a fixed platen, and *a platen movable* toward the fixed platen. Sicilia also fails to teach a second mold half having cavities. Sicilia further fails to teach the turret being movable along said axis to bring respective into and out of registration with the cavity. **Sicilia however does mention that the turret discussed above should be used in unison with the molding machine of Koch (Page 5, Paragraph [0075]).**

Koch in Figure 1 shows a molding machine with a rotatable turret (12) which will be replaced with the Sicilia turret. Koch's molding machine teaches stationary mold half (16) and a turret (12), which moves toward the stationary mold half (16). In further modifications (Figure 17), Koch shows a mold machine comprising a second movable mold half (488') comprising cavities in addition to the previously discussed mold half (16). Figure 17 is described in detail in column 12 lines 20-30. Figure 15 also shows a second movable mold half, 488 in a different alignment. Finally Koch also teaches the turret being movable on a base (20) via a set of rollers (22) in a direction to bring respective cores into and out of registration with the cavity, as the mold is closed and opened respectively (column 5, lines 23-26). Therefore, it would have been obvious to one having ordinary skill in the art to use the Sicilia turret with the Koch molding machine, because the Sicilia turret requires a molding machine to operate, and this combination is suggested in Sicilia (**Koch: Page 5, Paragraph [0075]**).

As regards to claims 2 and 4, it will be assumed by the examiner that claim 2 is dependent upon the equipment of claim 1 and claim 4 is dependent upon the equipment of claim 3. With regards to claims 2 and 4, Sicilia teaches in paragraph [0088] (page 6)

that the ejector portions (64c) close upon each other. The ejector portion (64c) closing is understood as having a horizontal movement when looking at the positioning of the ejector portions (64b) at station 44 (Figure 1). The second direction is described as a vertical movement in paragraph [0093], page 6 (Figure 1 displays a pictorial of the vertical movement (station 40)). If the first movement is a horizontal movement and the second is a vertical movement, then it is understood by the examiner as the first direction being at a right angle to the second direction.

With regards to claim 5, it is described above that the first movement is in a horizontal or longitudinal direction. Furthermore, in the above discussion of claims 1 and 3, the movement of the moveable platen (12, figure 1 of Koch) is in a horizontal fashion upon rollers (22). Therefore it is understood by one having ordinary skill in the art that the first direction is parallel to the directional movement of the movable platen.

With regards to claim 7, It is taught in Figure 5 of Koch, (column 5, lines 38-44) a mold half (14) having one portion cooperating with the other mold half (12) to define a cavity, and a second portion defining a recess (36) to receive a core (34a). The second mold half (discussed above) which is described in Figure 17 of Koch would be the mold half receiving a core carrying a previously molded article.

With regards to claim 8, a molding machine set up taught in Figure 15 (Koch) could be implemented to rotate the turret 180 degrees to reposition the cores bearing previously molded articles to positions within said recess (436b).

With regards to claim 9, Sicilia teaches in paragraph [0094] (page6), that four molding cycles are performed simultaneously, with each station performing its respective

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operations on a different one of four different cycles. Figure 1 also teaches the turret and first mold half being so configured that when one core (56b) is in registration with the cavity (104) at station 44, another core (56a) is being ejected at station 40.

With regards to claim 10, Figure 1 displays four core bearing faces (56 (a-d)). It is also evident to one having skill in the art, that the core bearing faces are rotated through 90 degree arcs to go one station to the next.

Allowable Subject Matter

4. Claim 6 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. A shield extending into contact with the cores, when the mold is closed was not found in prior art.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Any inquiry concerning this communication or earlier communications from the examiner should be directed to OMAR SIDDIQUE whose telephone number is (571)270-5515. The examiner can normally be reached on Monday to Thursday (7:30AM to 5PM) EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sam Chuan Yao can be reached on 1-571-272-1224. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/O. S./

Examiner, Art Unit 4111

/Sam Chuan C. Yao/

Supervisory Patent Examiner, Art Unit 4111